

**INTERFERENCE MANAGEMENT OF A PROCESSING  
COMMUNICATIONS SATELLITE**

**ABSTRACT OF THE DISCLOSURE**

A satellite based cellular communications system (10) for  
servicing multiple user terminals (14) is provided. The satellite based  
cellular communications system (10) includes at least one processing  
communications satellite (12) which supports communications uplinks  
(16) and communications downlinks (18) between multiple user  
terminals (14). A network operations center (24) having a central  
control processor (26) communicates with the processing  
communication satellite (12) on the communications uplinks (16) and  
the communications downlinks (18). The central control processor  
(26) minimizes intra-system interference between the multiple user  
terminals (14) by allocating a connection parameter to each user  
terminal (14) based upon accessing a plurality of communication  
system parameters.